CLAIMS:

1. A method for recording microscopic images with high optical resolution of particles or organisms suspended in a liquid, characterized in that the suspension is introduced in a measuring cell, especially a flow cuvette, and the image of the suspension is recorded by an optical sensor, wherein the optical sensor and measuring cell are moving relative to one another while the contents of the measuring cell are imaged completely or in part.

2. The method according to claim 1, characterized in that said sensor is moving along the measuring cell, optionally together with optical elements and a light source.

3. The method according to claim 1, characterized in that said measuring cell is moving along the sensor and optionally said optical elements and light source.

4. The method according to claim 1 or any of the further claims, characterized in that said measuring cell (cuvette) is imaged completely or in part onto said optical sensor by the movement of optical elements.

5. The method according to claim 1 or any of the further claims, characterized in that, after said introducing of the suspension, the particles contained first sink onto the ground of the measuring cell or into a region above the ground, and thus only part of the measuring cell contains the particles or organisms to be examined, so that this region can be imaged with a high optical resolution and covered by the optical sensor.

6. The method according to claim 1 or any of the further claims, characterized in that, after said introducing of the suspension, the particles contained first rise to the upper limiting surface of the measuring cell or into a region below the upper limiting surface, and thus only part of the measuring cell contains the particles or organisms to be examined, so that this region can be imaged with a high optical resolution and covered by the optical sensor.

7. The method according to claim 1 or any of the further claims, characterized in that said sinking or rising of the objects within the cuvette can be effected by different biological, physical or chemical techniques as well as by sedimentation or buoyancy.

8. The method according to claim 1 or any of the further claims, characterized in that said light source and optional screen and lens systems (condensor) are situated on one side of the measuring cell, and the objective (and optional screen systems) and optical sensor are located on the other, opposite side of the measuring cell (transmitted light illumination).

9. The method according to claim 1 or any of the further claims, characterized in that said light source and optional screen and lens systems (condensor) are situated on the same side of the measuring cell as the objective (and optional screens) and optical sensor (incident light illumination).

10. The method according to claim 8, characterized in that said the transmitted light illumination is realized as a bright field illumination.

11. The method according to claim 8, characterized in that said the transmitted light illumination is realized as a dark field illumination.

12. The method according to claim 8, characterized in that said the transmitted light illumination can be realized as a phase contrast illumination with the known phase contrast methods.

13. The method according to claim 9, characterized in that said the incident light illumination can be realized as a fluorescence illumination with the known fluorescence methods.

14. The method according to claim 10, 11 or 12, characterized in that a suitable light source or the insertion of one or more suitable filters enables the objects in the cuvette to be illuminated with a defined spectral intensity distribution of the incident light (illumination side).

15. The method according to claim 10, 11, 12, 13 or 14, characterized in that a suitable light source or the insertion of one or more suitable filters enables the optical sensor to be illuminated with a defined spectral intensity distribution of the incident light (detection side).

16. The method according to claim 10, 11, 12, 13 or 14, characterized in that the illumination modes mentioned in the claims may also be employed in the possible combinations resulting therefrom.

17. The method according to claim 1, characterized in that the suspension to be examined has been admixed with stains.

18. The method according to claim 1, characterized in that all or part of the filters employed are changed automatically or manually.

19. The method according to claim 1, characterized in that all or part of the objectives employed are changed automatically or manually.

20. A device for recording microscopic images with high optical resolution of particles or organisms suspended in a liquid, characterized in that the suspension is introduced in a measuring cell, especially a flow cuvette, and the image is recorded by an optical sensor, wherein the optical sensor and measuring cell are movable relative to one another and the contents of the measuring cell can be imaged completely or in part during such movement.

21. The device according to claim 20, characterized in that said light source and optional screen and lens systems (condensor) are situated on one side of the measuring cell, and the objective (and optional screen systems) and optical sensor are located on the other, opposite side of the measuring cell (transmitted light illumination).

22. The device according to claim 20 or 21, characterized in that said light source and optional screen and lens systems (condensor) are situated on

the same side of the measuring cell as the objective (and optional screens) and optical sensor (incident light illumination).